

REMARKS

In a final Office Action dated March 15, 2004 (paper no. 5), the Examiner rejected claim 1 under U.S.C. §102(b) as being anticipated by Long et al. (U.S. patent no. 5,710,990, hereinafter referred to as "Long"), claim 7 under U.S.C. §102(e) as being anticipated by Antonio et al. (U.S. patent no. 6,603,745, hereinafter referred to as "Antonio"), and claim 8 under U.S.C. §102(b) as being anticipated by Luz (U.S. patent no. 5,764,104, hereinafter referred to as "Luz"). The Examiner rejected claims 2 and 4 under 35 U.S.C. §103(a) as being unpatentable over Long in view of Jasper (U.S. patent no. 4,710,934), claim 5 under 35 U.S.C. §103(a) as being unpatentable over Long in view of Love et al. (U.S. patent no. 5,422,909, hereinafter referred to as "Love"), claim 6 under 35 U.S.C. §103(a) as being unpatentable over Long in view of Gilhousen et al. (U.S. patent no. 5,103,459, hereinafter referred to as "Gilhousen"), claims 9 and 11 under 35 U.S.C. §103(a) as being unpatentable over Luz in view Jasper, claims 12, 14, and 15 under 35 U.S.C. §103(a) as being unpatentable over Luz in view of Love, claim 13 under 35 U.S.C. §103(a) as being unpatentable over Luz in view of Gilhousen, and claims 16 and 17 under 35 U.S.C. §103(a) as being unpatentable over Luz in view of White et al. (U.S. patent no. 5,459,432, hereinafter referred to as "White"). The rejections are traversed and reconsideration is hereby respectfully requested.

The claims have been amended to clarify the claims. The applicants contend that the amendments do not necessitate a new search of the prior art.

The Examiner rejected claim 1 under U.S.C. §102(b) as being anticipated by Long, claim 7 under U.S.C. §102(e) as being anticipated by Antonio, and claim 8 under U.S.C. §102(b) as being anticipated by Luz. Claim 1 teaches a feedback component of an automatic gain control loop that includes a digital lowpass filter, a power averager, and a lookup table. Claim 7 teaches a feedback component of an automatic gain control loop comprising a first decimator, an infinite impulse response (IIR) filter, a second decimator, a power averager, and a lookup table. None of Long, Antonio, or Luz, individually or in combination, teaches such a feedback component of an automatic gain control (AGC) loop.

Long discloses an invention used to reduce transmit peak-to-average power by splitting the transmit data into two groups of channels. The peak-to-average for the sum of the two groups is compared to that of the sum of the two groups with 180° phase shift (for example, 'A+B' versus 'A-B'). The result with the lowest peak-to-average value is then transmitted. Nowhere does Long teach the filter, power averager, or lookup tables of the AGC feedback loop component of claims 1 or 7. Luz merely teaches a Fourier Transform Matrix (FTM) amplifier. Nowhere does Luz teach an AGC loop, let alone considering adjacent band interference within an AGC loop, and accordingly nowhere does Luz teach a low pass filter inside an AGC loop. Antonio merely teaches taking simple power measurements (such as the variance) to determine cell loading. While Antonio mentions power control loops, they are mentioned only in the most general sense and nowhere does Antonio detail the operation or components of a power control loop, let alone mention any filtering within a power control loop. Therefore, none of Long, Luz, or Antonio, individually or in combination, teaches the filter, power averager, or lookup tables of the AGC loop feedback component of claims 1 or 7. Accordingly, the applicants respectfully request that claims 1 and 7 may now be passed to allowance.

Since claims 2-6 depend upon allowable claim 1, the applicants respectfully request that claims 2-6 may now be passed to allowance.

Claim 8 provides a method of automatic gain control (AGC) that includes amplifying, by an amplifier, a communications signal according to a selectable gain to generate an amplified communications signal, digitizing the amplified communications signal to produce a feedback signal comprising a series of digital samples representative of the amplified communications signal, lowpass filtering the feedback signal to generate a lowpass filtered digital sample series, calculating an average power of the lowpass filtered digital sample series, and setting the selectable gain of the amplifier as a function of the average power. As described above, none of Long, Luz, or Antonio teach lowpass filtering or calculating an average power of a feedback signal in an AGC loop. Therefore none of Long, Luz, or Antonio, individually or in combination, teach the limitations of claim 8 of lowpass filtering of an AGC feedback signal to generate a lowpass filtered digital sample series and calculating an average power of the lowpass filtered digital

sample series. Accordingly, the applicants respectfully request that claim 8 may now be passed to allowance.

Since claims 9-17 depend upon allowable claim 8, the applicants respectfully request that claims 9-17 may now be passed to allowance.

The Examiner further contended that the preambles of the claims are mere statements of intended use that do not impart patentability if the prior art performs the same function in the same way and for the same result. The applicants assume that the Examiner is referring to claims 1-7. Claims 1 and 7, as amended, provide an automatic gain control loop having a feedback circuit including the listed elements. The applicants contend that this is a claim of an AGC loop with a specified and novel structure and is not a mere statement of intended use.

As the applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

Respectfully submitted,

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